2c	2k	$3
3c	2k	$4
4c	2k	$5
5c	2k	$6
6c	2k	$7
20c	2k	$21

2c	3k	$5
2c	4k	$7
2c	5k	$9

2(2)+1

3(2)+1

4(2)+1

colors

2c 17k

2(17)-1

3c	3k	$7	3+3+1	2(3)+1
4c	3kids	$9	4+4+1	2(4)+1
5c	3kids	$11	5+5+1	2(5)+1

#rounds

#colors

4c 3kids $9 2(4)+1 ex round

4c 4kids 3*(4)+1 $13

Write a conclusion for Sticky Gum) HW

1. what was your process
2. what is your solution
3. what does your solution represent

A Sticky Gum Problem

This extended problem starts with some specific problems, and then asks you to generalize what you've learned from them.

Here's the first problem:

1. Ms. Hernandez comes across a gumball machine one day when she is out with her twins. Of course, the twins each want a gumball. What's more, they insist on being given gumballs of the same color. (They don't care what color the gumballs are, as long as they're the same color.) Ms. Hernandez can see that there are only white gumballs and red gum balls in the machine. The gumballs are a penny each, and there is no way to tell which color will come out next. Ms. Hernandez decides she will keep putting in pennies until she gets two gumballs of the same color. Why is three cents the most she might have to spend in order to satisfy her twins?

2. The next day, Ms. Hernandez passes a different gumball machine. This one has three colors – red, white, and blue. What is the most Ms. Hernandez might have to spend at this new gumball machine in order to get matching gumballs for her twins.

3. Here comes Mr. Hodges with his triplets past the three-color gumball machine described in question two. Of course, his children also insist that they all get the same color gumball. What is the most Mr. Hodges might have to spend?

After you have answered the question above, create some examples of your own. You may want to begin with more examples about the Hernandez twins, using different numbers of colors. Or you may want to create other examples using the three- color gumball machine and larger sets of children.

As you create and solve examples of your own, look for a way to organize the information and look for patterns. Your ultimate goal is to find a formula so that, if someone tells you the number of colors and the number of children, your formula will tell you the maximum that the parent might need to spend.